

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 G01N33/48 C12Q1/68

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C12N C12Q G01N C07K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, Sequence Search, EMBASE, WPI Data, BIOSIS, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	DATABASE USPTO Proteins 'Online! 100% ID with SEQ. NO: 2 20 June 2002 (2002-06-20), "Sequence 1 from patent US 6365358." XP002307509 retrieved from EBI accession no. USPOP:AAM56211 Database accession no. AAM56211 See sequence listing	1-39, 41-43
X	-& US 6 365 358 B1 (INCYTE GENOMICS, INC) 2 April 2002 (2002-04-02) See entire document, especially: SEQ ID NO: 1; column 25, line 62 - column 26, line 1; claims. ----- -/--	1-39, 41-43

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *&* document member of the same patent family

Date of the actual completion of the international search

26 November 2004

Date of mailing of the international search report

12.07.2005

Name and mailing address of the ISA

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	<p>DATABASE EPO Proteins 'Online! 100% ID with SEQ ID NO: 2 15 February 2002 (2002-02-15), "Sequence 1904 from Patent WO0204514." XP002307510 retrieved from EBI accession no. EPOP:AX369194 Database accession no. AX369194 See Sequence listing</p>	1-39, 41-43
Y	<p>-& WO 02/04514 A (CORIXIA CORPORATION) 17 January 2002 (2002-01-17) See entire document, esp. Example 13 and SEQ ID NO: 1904.</p>	1-39, 41-43
Y	<p>----- LIPKOWITZ S: "The role of the ubiquitination-proteasome pathway in breast cancer. Ubiquitin mediated degradation of growth factor receptors in the pathogenesis and treatment of cancer" BREAST CANCER RESEARCH 2003 UNITED KINGDOM, vol. 5, no. 1, 2003, pages 8-15, XP002307507 ISSN: 1465-5411 Introduction, page 12, LH column, 3rd paragraph until end page 13; conclusion.</p>	12-21
Y	<p>----- ORLOWSKI ROBERT Z ET AL: "The role of the ubiquitination-proteasome pathway in breast cancer: applying drugs that affect the ubiquitin-proteasome pathway to the therapy of breast cancer." BREAST CANCER RESEARCH : BCR. 2003, vol. 5, no. 1, 2003, pages 1-7, XP002307508 ISSN: 1465-542X Abstract, Table 1, "Future directions" on P. 5- 6; Conclusions</p> <p>-----</p>	12-21

INTERNATIONAL SEARCH REPORT

International application No.
PCT/JP2004/011741

Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: 40, 41
because they relate to subject matter not required to be searched by this Authority, namely:

Although claims 23-36 are directed to a method of treatment and/or prophylaxis of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. ☒ Claims Nos.: 40, 44
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-16, 22-30, 36-40; 17-21, 32-35, 41-44

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box II.1

Although claims 23-36 are directed to a method of treatment and/or prophylaxis of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.

Continuation of Box II.2

Claims Nos.: 40, 44

Claim 40 is directed towards a composition for treating or preventing breast cancer, comprising as an active ingredient a pharmaceutically effective amount of a compound selected by a method of any one of claims 12-16. The method claims contain information only to the effects of the compound on the target test reagent/system, in other words contain only broad functional indications of the compound to be expected. There are no actual examples in the specification given of compounds functioning in this manner. It is therefore not possible to search for any compounds falling within the scope of claims 40 in the absence of any concrete functional and other (e.g. structural) parameters. This applies, *mutatis mutandis* to the subject-matter of claim 41, which refers thereto.

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.5), should the problems which led to the Article 17(2) declaration be overcome.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-16, 22-30, 36-40 (partly); 17-21, 32-35, 41-44 (completely)

Method of diagnosing breast cancer or a predisposition thereto comprising determining a level of expression of a breast-cancer associated gene A5657 in a patient-derived biological sample, wherein an increase in said sample expression level as compared to a normal control level of said gene indicates that said subject suffers from or is at risk of developing breast cancer;
 Method of screening for a compound for treating or preventing breast cancer consisting of contacting a test compound with a polypeptide encoded by A5657, detecting the binding activity between the polypeptide and the test compound and selecting the test compound that binds the polypeptide; or suppresses the biological activity of the compound or reduces the level of expression of A5657 used as a marker gene or in conjunction with a reporter gene; kit comprising a detection reagent binding two or more nucleic acid sequences selected from A5757, B9769, and C7965, or their corresponding encoded polypeptides; Methods for treatment or prevention of breast cancer comprising the administration of antisense, siRNA, antibody, vaccine, polypeptide; methods of inducing anti-tumour immunity using polypeptide derived from A5657 with/without APC, using compounds obtained by previously described screening methods; compounds/compositions for use thereby;

2. claims: 1-16, 22-25, 26-30, 36-40, all partly

As subject 1 but referring to gene designated B9769

3. claims: 1-16, 22-25, 26-30, 36-40, all partly.

As subject 1 but referring to gene designated C7965

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
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			CA 2313448 A1	24-06-1999
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			US 6746846 B1	08-06-2004
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			US 2002197669 A1	26-12-2002
			AU 1877002 A	21-01-2002
			CA 2415544 A1	17-01-2002
			EP 1343886 A2	17-09-2003
			JP 2004512824 T	30-04-2004
			WO 0204514 A2	17-01-2002
			US 2003054363 A1	20-03-2003
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			US 2002172952 A1	21-11-2002